

What is Claimed is:

1. A rocker box bottom for an internal combustion engine, the bottom comprising:
 - a body having a surface that is adapted to seal to a rocker box top, at least a part of the surface lying in a first plane, the body defining:
 - an oil/air inlet adapted to accept a mixture of oil and air from a crankcase of the internal combustion engine;
 - a chamber in fluid communication with the oil/air inlet;
 - a valve seat adapted to accept a valve between the oil/air inlet and the chamber, the valve seat lying in a second plane, the second plane being oriented relative to the first plane to define an acute angle therebetween;
 - an air outlet in fluid communication with the chamber; and
 - an oil outlet in fluid communication with the chamber, the oil outlet being located below the seat when the rocker box bottom is in an upright orientation, the oil outlet being adapted to receive oil from the chamber as the oil condenses from the mixture, the air outlet being adapted to receive air of the mixture as the air exits the chamber.
2. The rocker box bottom according to Claim 1, wherein the oil/air inlet is oriented to accept the mixture flowing generally in a first direction from the crankcase, and the air outlet is oriented to carry air exiting the chamber in a second direction, the second direction being approximately 180 degrees from the first direction, whereby the 180 degree turn of the air causes a pressure rise in the chamber.

3. The rocker box bottom according to Claim 1, further comprising:

the valve to be a reed valve, the reed valve having a proximal end that is connected to the body adjacent the valve seat and a distal end that is moveable relative to the body between open and closed positions, the reed valve including a pair of side edges extending between the proximal and distal ends;

the body including walls adjacent the side edges of the reed valve, the reed valve and the walls together being configured to direct the flow of the mixture generally in a first direction as the mixture exits the oil/air inlet through the valve, the chamber being shaped and configured to redirect the flow of the mixture exiting the oil/air inlet through the valve in a second direction generally toward the air outlet, the second direction being approximately 180 degrees from the first direction, whereby the 180 degree turn of the air causes a pressure drop around the turn.

4. The rocker box bottom according to Claim 1, wherein the air outlet is adapted to accept an air flow restrictor to restrict the air flow, whereby the restriction causes a pressure rise in the chamber.

5. The rocker box bottom according to Claim 4, wherein the air outlet has a circular cross-section.

6. The rocker box bottom according to Claim 1, wherein the valve seat is metallic.

7. A rocker box bottom for an internal combustion engine, the bottom comprising:

- a body having a surface adapted to seal to a rocker box top, the body defining
- an oil/air inlet adapted to accept a mixture of oil and air from a crankcase of the internal combustion engine, the oil/air inlet being oriented to accept the mixture flowing generally in a first direction from the crankcase;
- a chamber in fluid communication with the oil/air inlet;
- a valve seat adapted to accept a valve between the oil/air inlet and the chamber;
- an oil outlet in fluid communication with the chamber, the oil outlet being located below the seat when the rocker box bottom is in an upright orientation, the oil outlet being adapted to receive oil from the chamber as the oil condenses from the mixture; and
- an air outlet in fluid communication with the chamber, the air outlet being oriented to carry air exiting the chamber in a second direction, the second direction being approximately 180 degrees from the first direction, whereby the 180 degree turn of the air causes a pressure rise in the chamber.

8. The rocker box bottom according to Claim 7, wherein at least a part of the surface lies in a first plane, the valve seat lying in a second plane, the second plane being oriented relative to the first plane to define an acute angle therebetween.

9. The rocker box bottom according to Claim 7, further comprising:

- a reed valve, the reed valve having a proximal end that is connected to the body and a

distal end that is moveable relative to the body between open and closed positions, the reed valve including a pair of side edges extending between the proximal and distal ends;

the body including walls adjacent the side edges of the reed valve, the reed valve and the walls together being configured to direct the flow of the mixture generally in a first direction as the mixture exits the oil/air inlet through the valve, the chamber being shaped and configured to redirect the flow of the mixture exiting the oil/air inlet through the valve in a second direction generally toward the air outlet, the second direction being approximately 180 degrees from the first direction, whereby the 180 degree turn of the air causes a pressure drop around the turn.

10. The rocker box bottom according to Claim 7, wherein the air outlet is adapted to accept an air flow restrictor to restrict the air flow, whereby the restriction causes a pressure rise in the chamber.

11. The rocker box bottom according to Claim 10, wherein the air outlet has a circular cross-section.

12. The rocker box bottom according to Claim 7, wherein the valve seat is metallic.

13. A rocker box bottom for an internal combustion engine, the bottom comprising:
a body having a surface that is adapted to seal to a rocker box top, the body defining an oil/air inlet adapted to accept a mixture of oil and air from a crankcase of the internal

combustion engine, a chamber in fluid communication with the oil/air inlet, an air outlet in fluid communication with the chamber and adapted to receive air of the mixture as the air exits the chamber, and an oil outlet in fluid communication with the chamber, the oil outlet being located below the seat when the rocker box bottom is in an upright orientation, the oil outlet being adapted to receive oil from the chamber as the oil condenses from the mixture; and

a reed valve between the oil/air inlet and the chamber, the reed valve having a proximal end that is connected to the body and a distal end that is moveable relative to the body between open and closed positions, the reed valve including a pair of side edges extending between the proximal and distal ends;

the body including walls adjacent the side edges of the reed valve, the reed valve and the walls together being configured to direct the flow of the mixture generally in a first direction as the mixture exits the oil/air inlet through the valve, the chamber being shaped and configured to redirect the flow of the mixture exiting the oil/air inlet through the valve in a second direction generally toward the air outlet, the second direction being approximately 180 degrees from the first direction, whereby the 180 degree turn of the air causes a pressure drop around the turn.

14. The rocker box bottom according to Claim 13 wherein at least a part of the surface lies in a first plane, the valve lying generally in a second plane when it is in a substantially closed position, the second plane being oriented relative to the first plane to define an acute angle therebetween.

15. The rocker box bottom according to Claim 13, wherein the oil/air inlet is oriented to accept the mixture flowing generally in a first direction from the crankcase, the air outlet being oriented to carry air exiting the chamber in a second direction, the second direction being approximately 180 degrees from the first direction, whereby the 180 degree turn of the air causes a pressure rise in the chamber

16. The rocker box bottom according to Claim 13, wherein the air outlet is adapted to accept an air flow restrictor to restrict the air flow, whereby the restriction causes a pressure rise in the chamber.

17. The rocker box bottom according to Claim 16, wherein the air outlet has a circular cross-section.

18. The rocker box bottom according to Claim 13, wherein the reed valve is metallic.